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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,022	10/04/2006	Wolfgang Heep	LPL 3.3-002	8024

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EXAMINER
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LEE, DANIEL H.

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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07/29/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,022	<b>Applicant(s)</b> HEEP ET AL.	
	<b>Examiner</b> DANIEL LEE	<b>Art Unit</b> 1791	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 2-3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

The Amendment filed July 15, 2010 has been entered. Claims 1-16 are pending.

### ***Claim Objections***

1. Claims 2-3 are objected to because of the following informalities: In claims 2 and 3, "to the at at least" is grammatically incorrect. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-3, 5-6 and 12-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Reif (US 6582648).
4. Regarding claims 1-3 and 12-13, Reif discloses a method for manufacturing moulded bodies from oriented strands (col. 1, lines 10-14) material and a binder hardenable by electron radiation. Reif teaches a two-stage hardening in which there is a thermal part-hardening or first hardening and a second stage in which there is complete hardening or polymerisation of the binder (col. 5, see lines 7-50). The thermal first hardening, in this case, can take place at a comparatively lower temperature (col. 5,

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lines 17-20). Further, Reif teaches the use of a mixture of binders, one which is thermally hardenable and one which is hardenable in an electron beam (col. 5, lines 24-36). Also, a wood material body that is able to be cut is considered to be “shapeable into a predetermined shape.”

5. Reif does not expressly teach using pressure in the second stage. However, Reif makes it clear that there are clear advantages to a two-stage hardening process and that curing or hardening can be effected by any of heat, pressure, and radiation. Therefore, it would be within the scope of Reif to apply pressure as part of the hardening process since this is a means to arrive at complete hardening of the product. Additionally, two stage pressing apparatus is clearly depicted in Fig. 5.

6. Regarding claims 5-6, Reif discloses thermally hardenable binders such as urea-formaldehyde resin, melamine-formaldehyde resin, isocyanate, phenol-formaldehyde resin, among others (col. 1, lines 19-21).

7. Claims 4 and 14-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Reif as applied to claims 1-3, 5-6, and 12-13 above, and further in view of Chapman.

8. Regarding claims 4 and 14-16, Reif teaches adhesives and binders such as UF, PF, and isocyanate, inter alia, but do not expressly teach natural adhesives, at least one of a protein product or starch-bearing product.

9. Chapman discloses a process of making board products. Chapman teaches protein glues such as wheat flour and soybean flour are the most satisfactory natural adhesives (col. 5, lines 68-69).

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10. It would have been obvious to one of ordinary skill in the art at the time of the invention to use natural adhesives such as those taught by Chapman since other adhesives may be largely absorbed by the moist wood particles as soon as applied thereto, as taught by Chapman (see col. 5, lines 60-62).

11. Claims 7-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Reif as applied to claims 1-3, 5-6 and 12-13 above, and further in view of Fremont.

12. Regarding claims 7-8, Reif teaches that pressure and heat are used to effect curing of binding agents but does not expressly disclose the specific temperatures and pressures required in claims 7-8.

13. Fremont discloses fiberboard manufacture that is carried out in two stages, the first of which occurs at 180 to 210 deg. F (82.2 to 98.9 deg. C) and about 200 to 1000 psi (13.8 to 68.9 bar) and the second at 350 to 550 deg. F (176.7 to 287.8 deg. C) and 200 to 500 psi (13.8 to 34.5 bar) (see col. 2, line 31 to col. 3, line 31), which would fall within the limitations of claims 7 and 8.

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the temperatures and pressures disclosed by Fremont in a two-stage process to adjust the temperature and moisture content of the product and to render the ligneous (or woody) material plastic, as taught by Fremont (col. 2, lines 31-50).

15. Claims 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Reif as applied to claims 1-3, 5-6, and 12-13 above, and further in view of Clark (US 2773790).

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16. Regarding claims 9-11, Reif teaches thermally hardenable binders such as UF, MF, PF, isocyanate, inter alia (col. 1, lines 19-21) but is silent as to the phase of the binders.

17. Clark discloses a hard molded board and teaches that it is preferred to make use of a resinous binder of the thermosetting type such as phenol formaldehyde, urea formaldehyde, melamine formaldehyde and the like and to make use of such binders in dry powder form which clings to the wooden wafers in the desired concentration, but it will be understood that such resinous materials may be used in liquid form as well (col. 4, lines 61-68).

18. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the resinous binders in powder or liquid form since Clark teaches that both liquid and powder forms may be effectively used.

### ***Response to Arguments***

19. Applicant's arguments regarding the rejection over Shisko have been fully considered and are found persuasive. Shisko does not explicitly disclose using different first and second binder agents in which the first agent is partially cured and final curing results in the curing of the second agent and the partially cured first agent. Therefore, the rejection over Shisko has been withdrawn.

20. Applicant's arguments regarding Reif have been fully considered but are not found persuasive. Applicant argues that Reif discloses pressing "to accomplish partial

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hardening (pre-hardening) for shape stabilization" and concludes that this would produce a rigid, non-shapeable panel 58. However, Reif refers to the panels as partially hardened individual panels 58 which renders the conclusion that panel 58 is non-shapeable to be invalid. Further, there is no indication in Reif that the partially hardened panels are not shapeable.

21. Since the rejection over Reif is not considered to be deficient, the rejection of the dependent claims is maintained.

### ***Conclusion***

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL LEE whose telephone number is (571)270-7711. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katarzyna Wyrozebski can be reached on (571)272-1127. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. L./

Examiner, Art Unit 1791

/KAT WYROZEBSKI/

Supervisory Patent Examiner, Art Unit 1791